U.S. Department of Commerce Patent and Trademark Office

Attorney Docket No.: VAGCINE-07971

Serial No.: 10/630,074

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Applicant: David R. Milich et al.

(Use Several Sheets If Necessary)

FORM PTO-1449

(Modified)

(Use Several Sheets If Necessary) (37 CFR § 1.98(b))			Filing or 371(c) Date: 07/30/2003		Group Art Unit: 1648				
				U.S. PATENT DO	CUMENTS GT	88			
Examiner Initials	Cite No.	Serial / Patent Number	Issue Date	Appli	cant / Patentee	Zoc ass	Subclass	Filing	g Date
ВР	1	5,990,085	11/23/1999	1	eland et al. MAY	5 2006			
]	2	6,887,464	05/03/2005	Co	leman et al.	[] [] [] [] [] [] [] [] [] []			-
	3	2003/0099668	05/29/2003	Bac	hmann et al.	ENAME.			
	4	2004/0054139	03/18/2004	F	age et al.				•
	5	2004/0146524	07/29/2004	L	yons et al.				
	6	2004/01 52876	08/05/2004		Birkett				
1/	7	2004/0156864	08/12/2004		Birkett				
V	8	2004/0219164	11/04/2004	Co	leman et al.				
		F	OREIGN PATENTS	OR PUBLISHED FO	REIGN PATENT APP	LICATIONS		<u> </u>	
		Document Number	Publication Date	Country	y / Patent Office	Class	Subclass	Trans	lation
								Yes	No
BP	9	JP7252300	10/03/1995		Japan			x	
	10	WO 95/27083	10/12/1995		WIPO				_
1/	11	WO 99/40934	08/19/1999		WIPO				
V	12	WO 00/46365	08/10/2000		WIPO				
		OTHER	DOCUMENTS (Inclu	uding Author, Title, I	Date, Relevant Pages, P	lace of Publication)			
BP	BP 13 Belnap et al., "Diversity of core antigen epitopes of hepatitis B virus," Proc Natl Acad Sci USA, 100:10884-10889 (2003)								
	14	Fietelson et al., "Core particles of hepatitis B virus and ground squirrel hepatitis virus," J Virol, 43:687-696 (1982)							
	15	Fietelson et al., "Monoclonal antibodies raised to purified woodchuck hepatitis virus core antigen particles demonstrate X antigen reactivity," Virology, 177:357-366 (1990)							
	16	Galibert et al., "Nucleotide sequence of a cloned woodchuck hepatitis virus genome: Comparison with the hepatitis B virus sequence," J Virol, 41:51-65 (1982)							
	17	Gallina et al., "A recombinant hepatitis B core antigen polypeptide with the protamine-like domain deleted self-assembles into capsid particles by fails to bind nucleic acids," J Virol, 63:4645-4652 (1989)							
	18	Kidd-Ljunggren et al., "Genetic variability in hepatitis B viruses," J Gen Virol, 83:1267-1280 (2002)							
	19	Koschel et al., "Extensive mutagenesis of the hepatitis B virus core gene and mapping of mutations that allow capsid formation," J Virol, 73:215 2160 (1999)							
	20	Marion et al., "A virus in Beechey ground squirrels that is related to hepatitis B virus of humans," Proc Natl Acad Sci USA, 77:241-2945 (1						(1980)	
	21	21 Mason et al., "Virus of Pekin ducks with structural and biological relatedness to human hepatitis B virus," J Virol, 36:829-836 (1980)						(1980)	
	22	Milich et al., "Immune response to hepatitis B virus core antigen (HBcAg): Localization of T cell recognition site within HBcAg/HBcAg," J Immunol, 139:1223-1231 (1987)							
	23	Milich et al., "Antibody production to the nucleocapsid and envelope of the hepatitis B virus primed by a single synthetic T cell site," Nature, 329:547-549 (1987)							
1/	24	Milich et al., "Compa	rative immunogenicity	y of hepatitis B virus	core and E antigens" J	Immunol, 141:3617-3	624 (1988)		
	1								
	25	Millman et al., "Immu	inological Cross-react	tivities of woodchuck	and hepatitis B viral a	ntigens," Infect Immu	n, 35:752-757 (1	982)	

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next

communication to applicant.

ςъ	cel	7	^	f	2

FORM PTO-1449 (Modified)		49	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.: VACCINE-07971	Serial No.: 10/630,074		
		RMATIO	N DISCLOSURE STATEMENT BY APPLICANT	Applicant: David R. Milich et al.			
(Use Several Sheets If Necessary) (37 CFR § 1.98(b))				Filing or 371(c) Date: 07/30/2003	Group Art Unit: 1648		
		· · · · · · · · · · · · · · · · · · ·	U.S. PATENT DO	CUMENTS	L		
	BP	26	Ponzetto et al., "Core antigen and antibody in woodchucks after	r infection with woodchuck hepatitis virus," J	Virol, 52:70-76 (1984)		
	 	27	Ponzetto et al., "Radioimmunoassay and characterization of wo	woodchuck hepatitis virus core antigen and antibody," Virus Res, 2:301-315 (1985)			
		28	Pumpens and Grens, "Hepatitis B core particles as a universal d (1999)	niversal display model: A structure-function basis for development," FEBS Letters, 442:1-6			
		29	Schodel et al., "Immunization with recombinant woodchuck he woodchucks from woodchuck hepatitis virus infection," Vaccin	epatitis virus nucleocapsid antigen or hepatitis B virus nucleocapsid antigen protects ine, 11:624-628 (1993)			
		30	Shanmuganathan et al., "Mapping of the cellular immune respowoodchucks," J Med Virol, 52:128-135 (1997)	ine responses to woodchuck hepatitis core antigen epitopes in chronically infected			
		31	Stannard et al., "Antigenic cross-reactions between woodchuck hepatitis virus and human hepatitis B virus shown by immune electron microscopy," J Gen Virol, 64:975-980 (1983)				
		32	Tarar et al., "Expression of a human cytomegalovirus gp58 antigenic domain fused to the hepatitis B virus nucleocapsid protein," FEMS Immunol Med Microbiol, 16:183-192 (1996)				
		33	Ulrich et al., "Core particles of hepatitis B virus as carrier for foreign epitopes," Advances in Virus Research, 50:141-182 (1998);				
		34	Werner et al., "Serological relationship of woodchuck hepatitis virus to human hepatitis B virus," J Virol, 32:314-322 (1979)				
		35	Zheng et al., "The structure of hepadnaviral core antigens," J Biol Chem, 267:9422-9429 (1992)				
		36	Zlotnick et al., "Localization of the C terminus of the assembly domain of hepatitis B virus capsid protein: Implications for morphogenesis and organization of encapsidated RNA," Proc Natl Acad Sci USA, 94:9556-9561 (1997)				
	.						
				·	·····		
				· · · · · · · · · · · · · · · · · · ·			
					· · · · · · · · · · · · · · · · · · ·		
							
							
		-					
		_					
	_						

Date Considered:

EXAMINER:Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

06/08/2006

Examiner:

/Bo Peng/